

REMARKS

In response to the office action mailed November 17, 2005, Applicant respectfully requests reconsideration.

The Office Action set forth a number of objections to claims 3, 6-8, and 11-12. Each of these claim objections has been carefully considered by Applicant and the claims have been corrected to overcome these informalities.

Claim 1 was rejected under 35 U.S.C. §102(b) as being anticipated by Shinoda. According to the Office Action, Shinoda discloses a method for controlling an SCR-type switch (Fig. 5 element 70a, b, c, d, e, f), consisting of applying on the switch gate several periods of an unrectified high-frequency voltage (col. 5 lines 66-68), the power of one HF halfwave being insufficient to start the SCR-type switch (col. 5 lines 56-68). Applicant respectfully traverses this rejection.

As explained in the present specification, in the last two paragraphs of page 3, conventionally, a voltage pulse is applied to the gate electrode, the pulse must be of sufficient amplitude to turn on a junction and of sufficient intensity to have a sufficient current flow through this junction. In other words, the pulse must have a given minimum power. According to a common preconception, explained in the last paragraph of page 3, when positive and negative halfwaves are applied such that each halfwave itself is insufficient to turn on the thyristor, those skilled in the art thought that the effect of positive and negative halfwaves annuls and the A.C. signal has no triggering effect. By contrast, as explained in the fourth paragraph of page 4, that, unexpectedly, an SCR can be switched by a high frequency signal while each halfwave of the A.C. voltage has a power and/or duration insufficient to ensure the switching of the considered SCR-type component.

Shinoda, particularly in the portion cited in the Office Action, describes that the high frequency applied to the gate of a thyristor is such that a halfwave of the high frequency signal is sufficient to trigger the thyristor. Shinoda only repeats the triggering pulse in the form of a high frequency signal for that case in which the high frequency signal or the biasing voltage of the thyristor is impaired by spurious pulses (bad "environmental conditions"). In particular, the portion of Shinoda cited in the Office Action states:

In a thyristor, in general, when a forward bias voltage is applied to the anode, the thyristor can be turned on if a gate signal is supplied to the gate for a short period of time. However, it may not be turned on in accordance with environmental conditions. If the thyristor is always used under good environmental conditions, such an erroneous operation cannot occur. However, good environmental conditions may impair economy. Even if the erroneous operation state occurs, when the gate signal is supplied not once but repetitively, the thyristor can be reliably turned on.

Shinoda clearly describes that each pulse has normally (in good environmental conditions) a sufficient amplitude and duration and that, if the pulses applied to the gate are repeated, one of the pulses will arrive at a suitable time (while no parasitic pulse effects the biasing condition of the thyristor) so that the thyristor is turned on.

Clearly Shinoda in no way teaches or suggests that an SCR can be switched by a high frequency signal, a power of one high frequency wave being insufficient to start the SCR-type switch. Accordingly, claim 1 clearly distinguishes over Shinoda and is in allowable condition.

Claims 2-7 depend from claim 1 and are allowable for at least the same reasons.

Accordingly, withdrawal of the rejections of claims 1-7 is respectfully requested.

Claim 8 was rejected under 35 U.S.C. §102(b) as being anticipated by Ueda. According to the Office Action, regarding claim 8, Ueda discloses an SCR-type switch component, two main electrodes (Fig. 2(B) elements 30 & 33) and at least one control electrode (Fig. 2(B) element 34) formed on an insulating layer (Fig. 2(B) element 23) and arranged above a starting region of the component, said control electrode being intended to be connected to an unrectified HF power supply (col. 7, lines 67-68 & col. 8, lines 1-3). Applicant respectfully traverses this rejection.

The portion of Ueda cited in the Office Action states

The device for preventing degradation of the voltage resistance property provided by the polycrystalline silicon field plate electrode 32 is also effective for high frequency signals and transient voltages.

This portion of Ueda explains that polycrystalline silicon field plate electrode 32 not only prevents degradation of the voltage resistance property, but also prevents high frequency signals and transient voltages from disturbing the device. This is diametrically different from the SCR-type switch component recited in claim 8 in which the control electrode controls the SCR-type switch component in response to an unrectified high frequency power supply. In Ueda, polycrystalline

silicon field plate electrode 32 prevents high frequency signals from affecting the device, whereas in the claimed invention, the SCR-type switch component is responsive to an unrectified high frequency supply. Accordingly, claim 8 clearly distinguishes over Ueda and is in allowable condition.

Claims 9-12 depend from claim 8 and are allowable for at least the same reasons.

Accordingly, withdrawal of the rejections of claims 8-12 is respectfully requested. In view of the foregoing amendments and remarks, the application should now be in allowable condition.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

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Respectfully submitted,

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